

FUEL INJECTION SUSPENSION ELECTRICAL COOLING SYSTEMS AND MORE FOR SATURDAY MECHANICS

## DEGREE OF DIFFICULTY



MODERATE

BROKEN  
ACTUATOR ARM

LATCH



The plastic arm on this electrical tailgate actuator is broken and will have to be replaced. Check for proper operation of the latch itself, as a sticky mechanism may have overstressed the broken part. Also, check that the hatch itself is properly aligned when you're done.

## SATURDAY MECHANIC BY MIKE ALLEN

# Fixing Hood And Trunk Latches

**Checking your oil is simple enough**—until you attempt to open the hood. You try the remote release, but it seems a little hard to pull. Yank harder, and the familiar clunk of the hood popping up until the safety latch stops it doesn't happen. Your hood release is stuck. The dipstick will have to wait.

### OPEN SESAME

Actually, it may not be your hood. Many vehicles in this security-conscious age have remote releases for the trunk, tailgate and even the fuel-filler door. While these may be electrically actuated, the mechanism that latches the tailgate is still mechanical. You may need to use some electrical troubleshooting to repair this end of the system, be it a dead battery in the remote key fob or a logic failure in the body computer's theft-deterrent system. We'll talk about electrical issues in a different Saturday Mechanic.



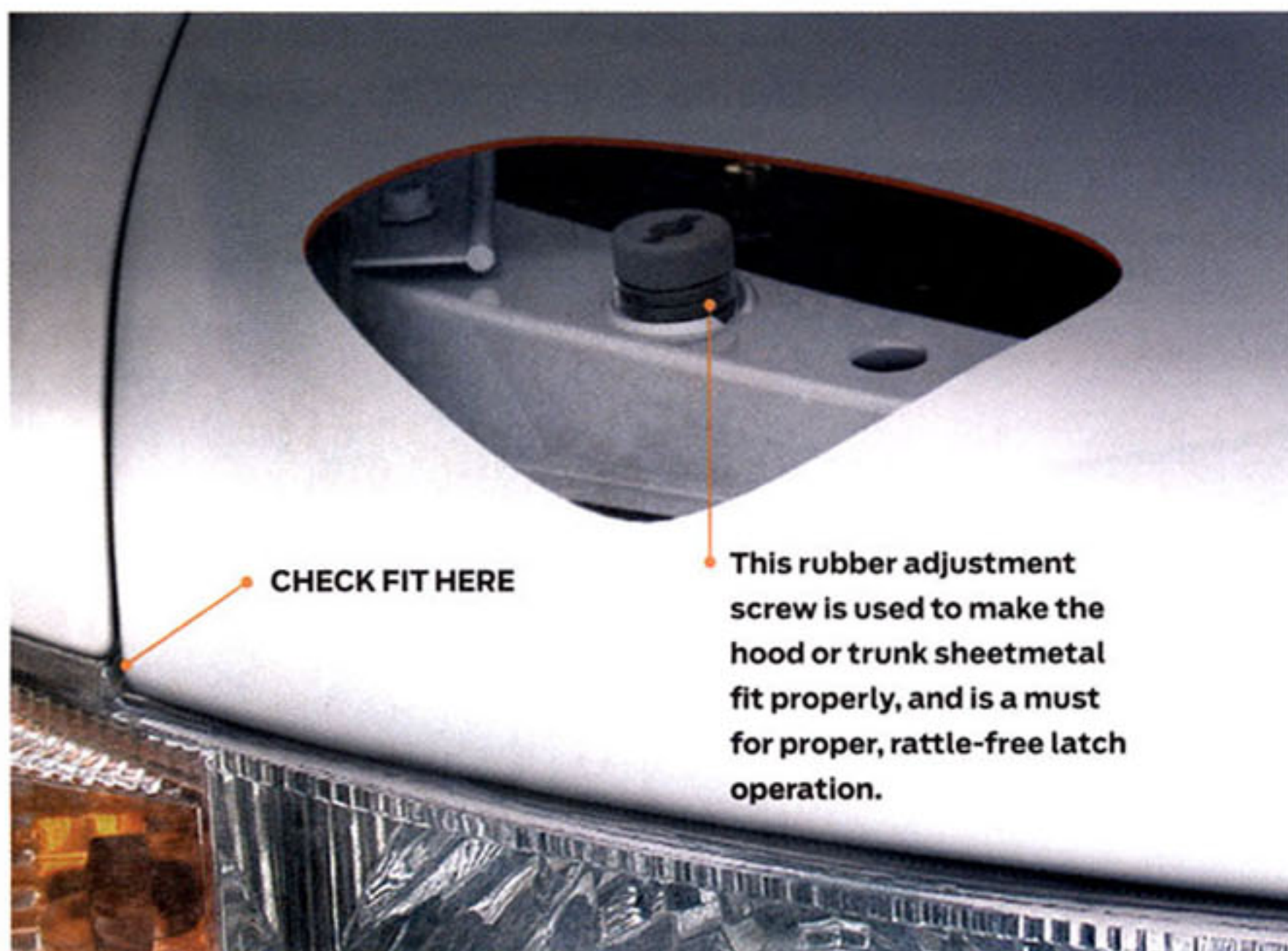
## SLAP AND TICKLE

Our most common scenario: Pull the hood release and the hood doesn't budge. But pull the inside release while someone presses the hood down, and the latch trips. There are usually a couple of things, happening concurrently, that cause this.

- The latch mechanism is sticky from corrosion and/or dirt. Sometimes all it takes to loosen things up is a healthy hosing down with penetrating oil while the mechanism is worked back and forth. Follow up the penetrating oil with spray lithium grease to keep things moving. Don't use silicone spray, which can wind up sucked into your air cleaner, contaminating your O<sub>2</sub> sensors.

- The cable that leads back to the interior release may be stretched or frayed. Sometimes the stop on the end of the cable is adjustable—it may have slipped a few millimeters. Readjust it appropriately. Then consider why the cable is stretching. What's binding up and making you pull too hard and overstress things? If the cable feels gritty on operation, try lubricating it. Use an aerosol spray lubricant—not penetrating oil, which is too light—with a straw-style nozzle. Perch the straw so the end butts against the end of the cable sheath and right alongside the inner cable. Fold a clean shop rag over the confluence of the straw and cable, and pinch tightly with your fingers. When you depress the nozzle on the aerosol can, lubricant will be forced between the cable and sheath, making the action of the cable much smoother. If you have compressed air available, you can use a blast of it to force the lube deeper into the sheath. This technique works for almost any Bowden-style cable, including heater-control cables, the throttle on your lawnmower and the brake cable on little Suzy's metallic purple banana-seat bicycle.

- If the cable is starting to corrode and has little steel threads poking out, it has already started to fail. Swap it out for a new one immediately. Splash



CHECK FIT HERE

This rubber adjustment screw is used to make the hood or trunk sheetmetal fit properly, and is a must for proper, rattle-free latch operation.

## Fitness Training

If the hood or latch is adjusted incorrectly, it may be difficult to open. This is often seen after a minor fender bender or after a fender or grille has been replaced (for instance, for an engine swap, a radiator swap or major engine work). Start by loosening all the bolts that hold the latch mechanism to the radiator core support, and see if the latch is adjustable. If so, remove the mechanism. Now lower the hood until it sits firmly on its rubber bumpers. Check to see that it fits correctly in the hood opening, with even gaps along the fenders and grille. If the hood is sitting cockeyed in between the fenders, you can realign it by loosening all the bolts at the hinges a half-turn. Jockey it around until it sits square in its intended place and tighten the hinge bolts. Screw the bumpers up or down until the hood sits correctly with respect to the fenders and grille in a vertical plane. Now you can reinstall the latch, snugging up the bolts so the mechanism is just high enough to give a quarter-inch or so of resistance before it closes fully. It shouldn't be necessary to slam the hood, and it should pop up readily when you pull the release. If the vehicle has been in an accident that involved front-end damage, you may have to compromise between an exact fit of the hood and the ability to open and close it easily.

the new one with some lubricant now and then to keep this from happening down the road.

### FAILURE IS NOT AN OPTION

Another scenario is that you pull on the release and it moves freely—because the cable is already broken. Now you're screwed. You have no easy way to open the hood, which can make for a long time between tuneups and oil

changes. If the cable has come adrift at the handle inside the passenger compartment, you may be able to reattach it. Or, perhaps you can grab the cable with a pair of pliers and yank on it to open the hood. Then you'll be able to access the other end of the cable and replace it. If the failure is at the hood end, check with a flashlight and a small mirror. (We use a small mirror with a swiveling, extendible handle.)

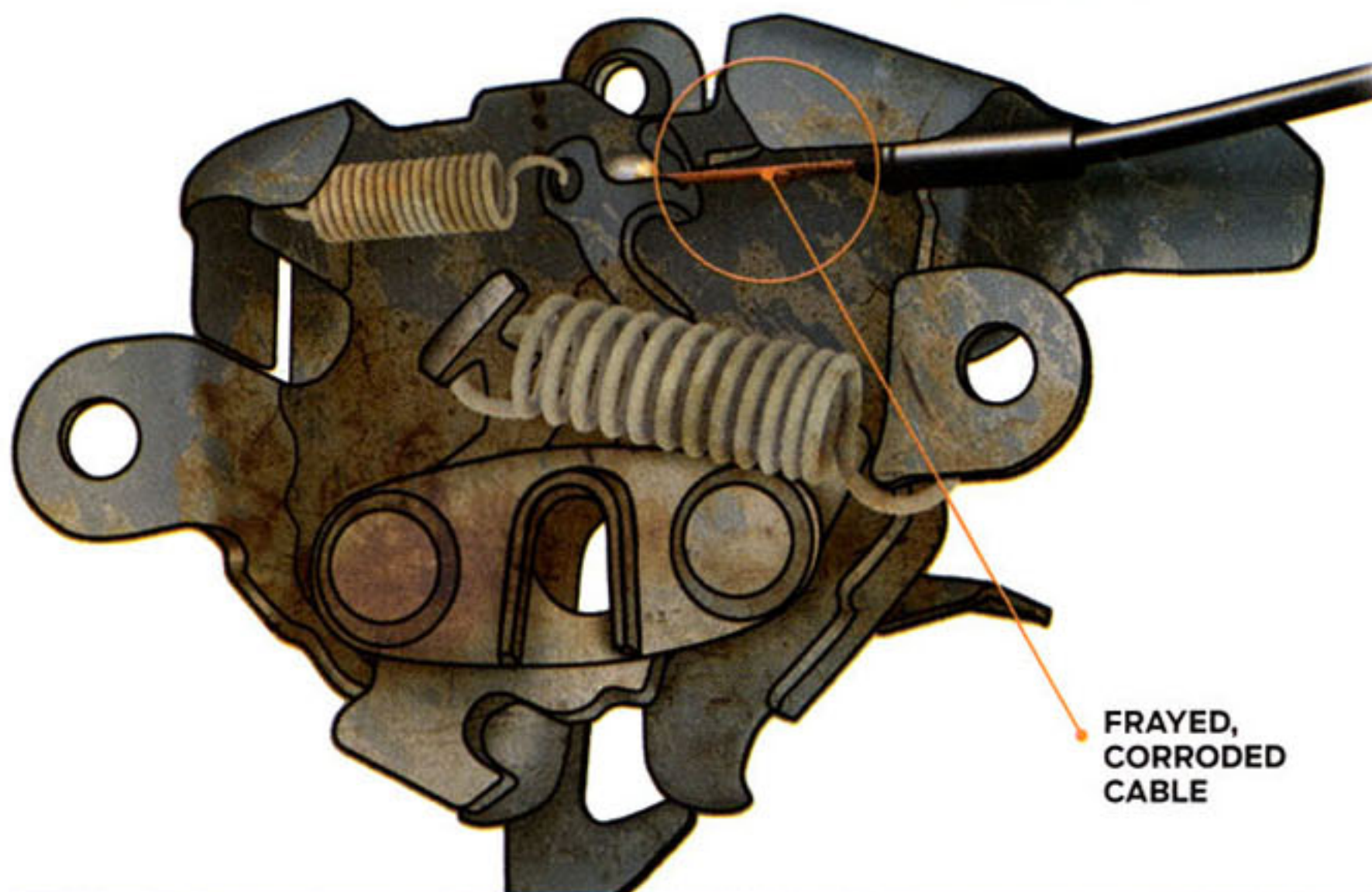
(Please turn to page 118)



Looking through the grille, you may be able to see the lever that the cable pulls on in the latch mechanism. If this is the case, try inserting a long screwdriver or other implement into the gap and tripping the latch. I've even resorted to fabricating a special tool from a piece of flat steel. Find a similar car, open the hood, and figure out how to bend the steel and then how to thread it into the latch and trip it. Practice on your example vehicle to make it easy.

Try to loosen or remove the grille to make access easier. Try not to do this where the local police might take an interest in your activities unless you have your ID and the registration handy, especially late at night.

● If all else fails, it may be necessary to drill a hole in the hood sheetmetal to trip the latch, but this is a last resort. Check the vehicle's shop manual for insight into opening the hood in the event of a cable failure.



FRAYED,  
CORRODED  
CABLE

Corrosion and dirt have made this hood latch difficult to operate. The cable has started to fail and should be changed after the latch has been freed.

### TRUNK LINE

Like the hood, the trunk should be adjusted on its hinges and rubber stops to close with a proper fit. (See "Fitness Training," page 116.)

The latch mechanism can then be tweaked to achieve proper function. If the mechanical pushbutton or key tumbler is hard to actuate, start with adjustments and lubrication.

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Many vehicles use electrical actuators for the trunk or hatch. If the electrical actuator is kaput, you'll need to troubleshoot that with a digital voltmeter (rated at 5 megohm, to be safe) and a schematic. But if you can hear the actuator clicking and the latch doesn't open, you've got a hardware problem.

If there's a keyhole, you should be able to open the lid or hatch with a key. There's an urban legend about the owner of the high-priced luxury car who got a flat tire and was unable to open the trunk and access the spare because the remote-control trunk key fob had dead batteries. After waiting 2 hours for the tow truck to arrive, the owner then watched the truck driver easily open the trunk—by turning the key in the lock—and then change the tire. Moral: Don't make this any harder than necessary.

Own a minivan? You may need to crawl into the back of the luggage area

to remove the trim panel and open the latch manually to access the mechanism. If your sedan has a balky trunk lid, you may need to fold down or remove the rear seat to get anywhere near the mechanism. Check the owner's manual for hints about emergency access to the trunk—there may be a simple cable to pull in case of major failures. All new cars have an emergency cable release meant to prevent a child from getting trapped inside a locked trunk. If you can reach that release by getting around the rear seat-back, you can pop the trunk. Once the hatch or trunk is open, you can clean and lube the parts to free things up.

Trunks and hatches often respond to proper fitting and adjustment, just like hoods. Get the sheetmetal to fit properly, and then adjust the latch and striker for proper function. Don't forget to lubricate the out-of-sight part of the latch mechanism. One

important part of a tuneup is to lubricate the door, hood and trunk hinges and latches. If your mechanic is neglecting this, you should take 5 minutes and lubricate these parts yourself.

Most of the time, when there is a failure of the latch mechanism, it's a plastic component that has broken. You'll need to go to the dealer for a replacement part. Sticky or hard-to-operate latches usually need nothing more than lubrication and adjustment.

### FILL 'ER UP

Fuel doors usually have a simple bolt-based latch, with a simple cable to operate it. If the cable is gritty or sticky, try lubing it with the shop towel/spray lube trick mentioned earlier. If the bolt doesn't retract enough, look for an adjustment for length at one end of the cable or the other. Lube the hinges as well, and make sure the spring isn't broken or loose. **PM**

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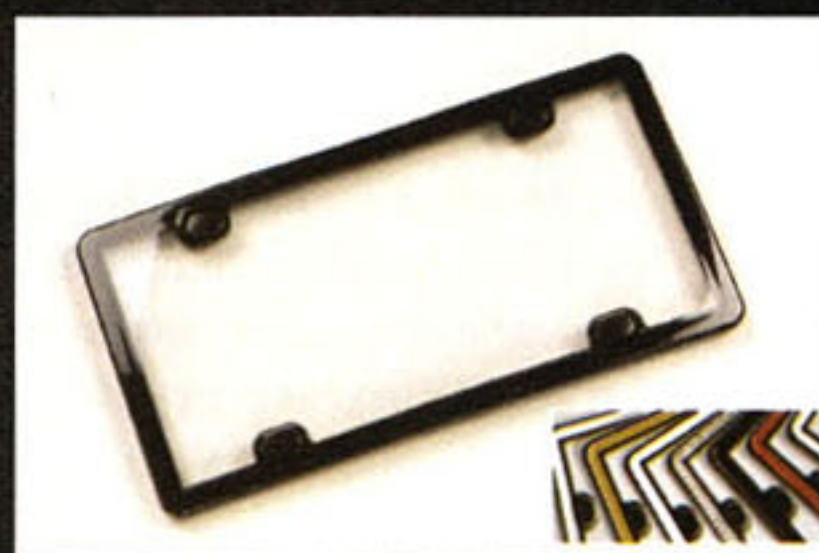


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